IN THE

UNITED STATES PATENT AND TRADEMARK OFFICE

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|---|---|
| **APPLICANT:** | Yoram Nelken |
| **SERIAL NO:** | 10/008,152 |
| **FILED:** | December 4, 2001 |
| **TITLE:** | System and Method for Automatic Task Prioritization |
| **EXAMINER:** | Unknown |
| **ART UNIT:** | 2163 |
| **ATTY. DKT. NO.:** | PA2325US |



## CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231, on the date printed below:

Date: 8/16/2002

Wendi R. Schepler

COMMISSIONER FOR PATENTS
WASHINGTON, DC 20231

## PETITION TO MAKE SPECIAL UNDER M.P.E.P. § 708.02, VIII

**1. Petition**

Applicant hereby petitions to make this application, which has not received any examination by the Examiner, special.

## 2. Claims

All of the claims in this application are directed to a single invention.

If the Office determines that all of the claims presented are not obviously directed to a single invention, then Applicant will make an election without traverse as a prerequisite to the grant of special status.

## 3. Search

A search has been made by a professional patent search firm. The field of search covered Class 704, subclass 9; Class 709, subclasses 100, 102, 103, and 107; Class 710 subclasses 240, 241, and 244.

## 4. Copy of references

A copy of the references deemed most closely related to the subject matter encompassed by the claims has been previously submitted with an Information Disclosure Statement filed on August 15, 2002.

## 5. Detailed discussion of the references

There is submitted herewith a detailed discussion of the references, which particularly points out how the claimed subject matter is distinguishable over the references.

**6. Fee**

The fee for this petition required by 37 C.F.R. 1.17(i) is to be paid by the attached check for **$130.00**.

Respectfully submitted,

Yoram Nelken

Dated: 8/16/2002

By: Wendi R Schepler

Wendi R. Schepler, Reg. No. 43,091
Carr & Ferrell, LLP
2225 East Bayshore Road, Suite 200
Palo Alto, CA 94303
Tel: (650) 812-3451
Fax: (650) 812-3444

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## DETAILED DISCUSSION OF THE REFERENCES ACCOMPANYING PETITION TO MAKE SPECIAL

Dear Sir:

In the present Application, which is a Continuation Application from U.S. Patent Application No. 09/602,588 filed on June 21, 2000, the following is provided in support of the Petition to Make Special, a detailed discussion of the references cited in the Information Disclosure Statement, mailed August 15, 2002, follows:

**U.S. Patents**

**U.S. Patent No. 5,068,789**

Issued: Nov. 26, 1991

Title: Method and Means for Grammatically Processing a Natural Language Sentence

Inventor: van Vliembergen

Detailed Discussion:

This patent discloses a method of parsing sentences into constituent parts. The parts are tested against rules to determine the meaning of each sentence. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,321,608**

Issued: Jun. 14, 1994

Title: Method and System for Processing Natural Language

Inventors: Namba et al.

Detailed Discussion:

This patent discloses a method for processing natural language into operational commands for a computer system. The method allows a person to give instructions to a computer without using a special language or commands defined for the computer. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,878,385**

Issued: Mar. 2, 1999

Title: Method and Apparatus for Universal Parsing of Language

Inventors: Bralich et al.

Detailed Discussion:

This patent discloses a method for syntactical parsing of input strings of natural language text. The method performs a dictionary look-up for each word in the string and attaches selected words in the string to a preceding word according to selection rules. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,251,131**

Issued: Oct. 5, 1993

Title: Classification of Data Records by Comparison of Records to a Training Database Using Probability Weights

Inventors: Masand et al.

Detailed Discussion:

This patent discloses a system for classifying natural language data using a training database containing training records. Features extracted from natural language input are used to query the training records to determine probability weights of training records with matching features. Further processing determines which training records most probably match the record of the natural language input. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,761,631**

Issued: Jun. 2, 1998

Title: Parsing Method and System for Natural Language Processing

Inventor: Nasukawa

Detailed Discussion:

This patent discloses a process by which a grammatically incorrect sentence, which cannot be parsed by a conventional parsing process, is analyzed using context information, specifically parsing results for an identical word row in a sentence that could be parsed. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,687,384**

Issued: Nov. 11, 1997

Title: Parsing System

Inventor: Nagase

Detailed Discussion:

This patent discloses a system for parsing natural language. An input sentence is morphologically analyzed by comparison with a language-specific dictionary. A parsing unit applies context-free grammatical rules to the input sentence. The parsing results are stored in an analysis table unit. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,099,425**

Issued: Mar. 24, 1992

Title: Method and Apparatus for Analyzing the Semantics and Syntax of a Sentence or a Phrase

Inventors: Kanno: Yuji et al.

Detailed Discussion:

This patent discloses a method for proofreading Japanese text and analyzing English sentences. The method analyzes the semantics and syntax of text to correct errors. The method may also include morphological analysis. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,101,349**

Issued: Mar. 31, 1992

Title: Natural Language Processing System

Inventors: Tokuume et al.

Detailed Discussion:

This patent discloses a system for generating natural language sentences. The system uses grammatical rules that include a phrase structure part, a semantic part, a condition part, and a message part. The system applies a grammatical rule to generate a phrase structure for a sentence and then generates a sentence in accordance with the phrase structure. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,371,807**

Issued: Dec. 6, 1994

Title: Method and Apparatus for Text Classification

Inventors: Register et al.

Detailed Discussion:

This patent discloses a system for classifying natural language text. The system first parses text into recognized keywords, then uses the keywords to deduce further facts from the text. The facts from the text are compared to categories in a knowledge base to determine which categories are most similar to the text. Rules may be used to further refine the determination of which categories are most similar to the text. Using the results of natural language processing to assign a priority to a communication, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,542,088**

Issued: Jul. 30, 1996

Title: Method and Apparatus for Enabling Control of Task Execution

Inventors: Jennings, Jr. et al.

Detailed Discussion:

This patent discloses a system that allows a user to control priorities assigned to tasks to be performed by a computer. Whenever the user requests a task, the system calculates whether the task will take more time than a user tolerance. If so, the user is presented with a choice of canceling the task or assigning it to a background manager, which then handles the execution of the task. If the task requires less time, it is performed immediately. The user may rearrange the tasks in the background manager. A system that automatically assigns priority to a task received by a contact center, as claimed by the Applicant, is not disclosed or taught by this patent. Also, storing tasks in a queue according to priority without user interaction, as claimed by the

Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 4,642,756**

Issued: Feb. 10, 1987

Title: Method and Apparatus for Scheduling the Execution of Multiple Processing Tasks in a Computer System

Inventor: Sherrod

Detailed Discussion:

This patent discloses system that schedules tasks to be executed by a central processing unit of a computer. Tasks have pre-assigned external priorities and internal priorities assigned by the computer according to a state of the task. The order in which tasks are executed may be changed when the state of a task changes. A contact center configured to receive tasks, including tasks expressed in natural language, as claimed by the Applicant, is not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 3,648,253**

Issued: Mar. 7, 1972

Title: Program Scheduler for Processing Systems

Inventors: Mullery et al.

Detailed Discussion:

This patent discloses a program scheduler that receives tasks to be executed by a multiprocessor system. Each task has an associated service ratio of the time required for a task to be processed to the time remaining before the task must be completed. The service ratio indicates the need of each task for service from a processor. A contact center configured to receive tasks, including tasks expressed in natural language, as claimed by the Applicant, is not disclosed or

taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 4,286,322**

Issued: Aug. 25, 1981

Title: Task Handling Apparatus

Inventors: Hoffman et al.

Detailed Discussion:

This patent discloses a task handling apparatus for a computer system that includes task dispatching queues. Task dispatching takes place on a priority basis out of the dispatching queues. A contact center configured to receive tasks and a decision engine for determining a priority code for each task, as claimed by the Applicant, are not taught or disclosed by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 4,805,107**

Issued: Feb. 14, 1989

Title: Task Scheduler for a Fault Tolerant Multiple Node Processing System

Inventors: Kieckhafer et al.

Detailed Discussion:

This patent discloses a system for scheduling tasks to be performed by multiple processors such that if one processor fails tasks will be rescheduled to another processor. Tasks are stored in a list in their preferred order of execution. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 4,814,974**

Issued: Mar. 21, 1989

Title: Programmable Memory-Based Arbitration System For Implementing Fixed and Flexible Priority Arrangements

Inventors: Narayanan et al.

Detailed Discussion:

This patent discloses a system for controlling concurrent access by devices to shared resources in a computer system such a memory devices, input/output devices, and buses. The system includes a memory having storage segments that correspond to unique priority levels. Identifications of devices are stored in storage segments such that each device is associated with a priority level. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,210,872**

Issued: May 11, 1993

Title: Critical Task Scheduling for Real-Time Systems

Inventors: Ferguson et al.

Detailed Discussion:

This patent discloses a method for scheduling tasks in a real-time computer system such that non-critical tasks do not prevent the timely execution of critical tasks. Each task is evaluated in terms of its consumption of a resource, and will stop being processed if it consumes more than its quota. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,230,054**

Issued: Jul. 20, 1993

Title: Priority Order Judging Device

Inventor: Tamura

Detailed Discussion:

This patent discloses a hardware circuit for judging the priority order of priority-coded signals without the use of encoders or decoders. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,247,677**

Issued: Sep. 21, 1993

Title: Stochastic Priority-Based Task Scheduler

Inventors: Welland et al.

Detailed Discussion:

This patent discloses a scheduler that selects tasks for execution by a computer system on the basis of a random number weighted by task priority. Exemplary tasks are batch processing jobs and users on a time-sharing system. In this patent, every task has a nonzero probability of being selected to execution, that is all tasks have a chance of being selected, such that low priority tasks are not locked out. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,325,526**

Issued: Jun. 28, 1994

Title: Task Scheduling in a Multicomputer System

Inventors: Cameron et al.

Detailed Discussion:

This patent discloses a system for hierarchically linking application programs, layers, and partitions together to provide an optimal order of execution of tasks in a multi-computer system. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,437,032**

Issued: Jul. 25, 1995

Title: Task Scheduler for a Multiprocessor System

Inventors: Wolf et al.

Detailed Discussion:

This patent discloses method for scheduling tasks performed by a multiprocessor system where task are prioritized by comparing a desired level of concurrent task activity and the actual level of concurrent task activity. Tasks may be prioritized externally or prioritized according to estimated completion time. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,526,521**

Issued: Jun. 11, 1996

Title: Method and System for Process Scheduling from Within a Current Context and Switching Contexts Only When the Next Scheduled Context is Different

Inventors: Fitch et al.

Detailed Discussion:

This patent discloses a scheduling method that prevents a context switch when it would likely be redundant. Process scheduling is divided into an evaluation function, which determines whether a context switch is needed, and a context switcher. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,630,128**

Issued: May 13, 1997

Title: Controlled Scheduling of Program Threads in a Multitasking Operating System

Inventors: Farrell et al.

Detailed Discussion:

This patent discloses a multitasking operating system that allows application programs to influence the schedule of execution of program threads by specifying parameters for the program threads. The operating system uses these parameters to schedule program threads for execution, selecting the highest priority program thread available from each dispatch class for execution by a processor. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,636,124**

Issued: Jun. 3, 1997

Title: Multitasking Industrial Controller

Inventors: Rischar et al.

Detailed Discussion:

This patent discloses a real-time control system that integrates both periodic and event-driven tasks so that each type of task may be implemented through programming. A programmer inputs priority information for each task to the system. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,745,736**

Issued: Apr. 28, 1998

Title: Information Processing System Wherein Processing Tasks are Prioritized and Performed in Order of Priority

Inventor: Picart

Detailed Discussion:

This patent discloses a processing system in a modem that processes tasks, such as a transmission task that modulates digital data by a carrier signal, in order of a pre-established priority. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,940,612**

Issued: Aug. 17, 1999

Inventors: Brady et al.

Detailed Discussion:

This patent discloses a system and method for controlling the execution of priority ordered tasks in a multi-nodal processing system. Queues of tasks with pre-determined priority assignments are disclosed. However, the patent does not disclose assigning priorities as claimed by the Applicant. Specifically, a decision engine configured to determine a priority code is not disclosed as claimed by the Applicant. Therefore, the Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,944,778**

Issued: Aug. 31, 1999

Title: Periodic Process Scheduling Method

Inventors: Takeuchi et al.

Detailed Discussion:

This patent discloses a method for scheduling the waking and sleeping of tasks for processing continuous media data such as video. A contact center configured to receive tasks and a decision module configured to determine the priority of each task, as claimed by the Applicant, are not disclosed or taught by this patent. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,995,513**

Issued: Nov. 30, 1999

Inventors: Harrand et al.

Detailed Discussion:

This patent discloses a multitask processing system including a data and a command bus comprising a sequencer and operators for performing tasks in the order of pre-assigned priority. Unlike the Applicant's claimed invention, there is no disclosure of a decision engine configured to determine a priority code for each of said received communications. Instead, the patent discloses the receipt of tasks and requests, which have been pre-assigned priority orders. Furthermore, the patent does not disclose the assignment or determination of priority codes. Therefore, Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 5,999,990**

Issued: Dec. 7, 1999

Inventors: Sharrit et al.

Detailed Discussion:

This patent discloses a communicator including a plurality of reconfigurable resource units (RRUs) that can each be dynamically altered to perform any of a multitude of processing tasks. A priority system can be used to determine which of the RRUs is reconfigured to process a task. However, this patent discloses sequentially and tandem processing, but does not disclose a decision engine configured to determine a priority code for tasks wherein an agent having a judgment of priority selects tasks from a queue according to the judgment of priority. The reference also does not disclose a decision engine capable of learning new priority criteria based on a relative importance of tasks learned from an order in which an agent selected tasks. Thus, the Applicant's claimed invention is distinguishable over this reference.

**U.S. Patent No. 6,058,389**

Issued: May 2, 2000

Inventors: Chandra et al.

Detailed Discussion:

This patent discloses an advanced message queuing system integrated into a database system wherein the system forms a part of the database system's kernel. A queue table holds a set of queues, each of which may have multiple messages. Parameters related to the messages are contained within the queue table, including message priority. Although the patent discloses processing messages within queues based upon parameters such as message priority, there is no disclosure of a decision engine capable of learning new priority based on a relative importance of communications learned from an order in which an agent selected communications. Instead, this disclosure discusses executing messages according to the parameter metadata enclosed within the queuing table. No capability for learning new priority or determining a priority code is disclosed. Therefore, this reference is distinguishable from Applicant's claimed invention.

**U.S. Patent No. 6,061,709**

Issued: May 9, 2000

Inventors: Bronte et al.

Detailed Discussion:

This reference discloses a method and system for permitting a software-based executive to execute concurrently with a hardware-based executive. A set of registers are used to preserve the contents of current state registers when a high priority task or high priority interrupt preempts a low priority task. The tasks are drawn from either a high priority or a low priority queue. This reference does not disclose a decision engine configured to *determine* a priority code for each task, but instead discloses taking tasks from pre-determined queues of priority. Thus, this patent is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,092,095**

Issued: July 18, 2000

Inventors: Maytal

Detailed Discussion:

This patent discloses a real-time manager for a personal computer managing the operation of real-time tasks while the personal computer also performs other tasks. This reference discloses a method and system for dynamically determining how to allocate between real-time and non-real-time tasks while monitoring processor power. The reference does not disclose a system wherein a decision engine is capable of learning new priority criteria based upon a relative importance of communications learned from an order in which an agent selected communications. Thus, the Applicant's claimed invention is distinguishable from this reference.

**U.S. Patent No. 6,115,734**

Issued: Sept. 5, 2000

Inventors: Mansion

Detailed Discussion:

This reference discloses a method of dynamically allocating tasks to events arriving on a set of queues within a data processing system. Although this reference discloses processing events in an order set by priorities set by a transmitter, there is no disclosure of a decision engine configured to determine a priority code which is capable of learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected communications. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,138,139**

Issued: Oct. 24, 2000

Inventors: Beck et al.

Detailed Discussion:

This reference discloses a method and apparatus for supporting and tracking diverse interaction paths within a multimedia communication center using existing enterprise rules. This patent discloses a text-analyzer for parsing text messages. However, the reference does not disclose a parser configured to analyze text, voice, natural language content, emotional content, identify keywords, identify concepts, and determine relationships between the concepts of the items received. In fact, the reference discloses taking descriptive notes for non-text media types such as video or graphic, and recording and storing other transactions, not parsing, for example, emotional content. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,148,322**

Issued: Nov. 14, 2000

Inventors: Sand et al.

Detailed Discussion:

This reference discloses a processing unit with an improved ability to coordinate the execution of multiple tasks with varying priorities. The processing unit initiates execution of tasks with the highest priority whose request condition is satisfied. In the reference, execution of tasks occurs based upon an assigned priority. However, the Applicant's claimed invention determines a priority code, from learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected communications. This reference does not disclose determining a priority code as in the Applicant's claimed invention. Therefore, the Applicant's claimed invention is distinguishable from this reference.

**U.S. Patent No. 6,151,538**

Issued: Nov. 21, 2000

Inventors: Bate et al.

Detailed Discussion:

This patent discloses a hybrid control system which executes tasks within a transaction which is executed in a given order. This reference does not disclose a system for automatically prioritizing communications comprising a decision engine which includes a parse configured to analyze content of a received communication. Thus this patent is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,182120 B1**

Issued: Jan. 30, 2001

Inventors: Beaulieu et al.

Detailed Discussion:

This patent discloses a system and a method for processing queued messages based on a combination of queue delay and queue priority. More specifically, the patent discloses processing queued messages based on time and weight criteria. This reference discloses queues in a critical state are processed based upon a pre-determined level of priority. However, the reference does not disclose a decision engine for determining a priority code. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,212,544 B1**

Issued: Apr. 3, 2001

Inventors: Borkenhagen et al.

Detailed Discussion:

This reference discloses a system and method for high performance multi-threaded computer data processing. Although the reference discloses a thread switch algorithm for determining priority, there is no disclosure of a parser configured to analyze content of a received communication. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,223,201 B1**

Issued: Apr. 24, 2001

Inventors: Reznak

Detailed Discussion:

This patent discloses a data processing system within a self-managing application program including a number of tasks and a processing time monitor. Although the reference discloses executing tasks based upon priority order, there is no disclosure for any mechanism, such as a decision engine, for determining priority. Therefore, the Applicant's claimed invention is distinguishable from this patent.

**U.S. Patent No. 6,243,735 B1**

Issued: June 5, 2001

Inventors: Imanishi et al.

Detailed Discussion:

This reference discloses a multitasking microcontroller and a data processing system to control a plurality of hardware engines. A priority encoder is disclosed which selects a task to be run next based upon data held in a task management table. The priority encoder does not disclose, as in the Applicant's claimed invention, a decision engine capable of learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected communications. Thus, the reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,260,058 B1**

Issued: Jul. 10, 2001

Inventors: Hoenninger et al.

Detailed Discussion:

This patent discloses a process for controlling technological operations and processes, particularly as it relates to complex control programs. This reference discloses assigning priority to tasks based on sequencing control corresponding to preemptive multitasking. Priority assignments are made in levels based on the time performance required for specific tasks. The tasks are processed based on these priority levels. However, this reference does not disclose learning new priority criteria based on relative importance of tasks. Instead, the reference bases priority assignments on time. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,301,602 B1**

Issued: Oct. 9, 2001

Inventors: Ueki

Detailed Discussion:

This patent discloses a priority information display system that displays information on the priority of processes effective in debugging. The system displays priority information in a three-dimensional manner and provides users with the priority information. However, the patent does not disclose a decision engine or other mechanism for determining a priority code or information, but instead receives and displays only. The reference only discloses that when a specific event related to the priorities of processes occurs, the system records the change in priority information, but does not actually provide a mechanism for changing priority. The system disclosed by the reference receives and records changes from outside the system. Thus, this patent is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,308,197 B1**

Issued: Oct. 23, 2001

Inventors: Mason et al.

Detailed Discussion:

This patent discloses a method of using real-time machine control software integrating both event-based mode and task-based components. The patent provides for a software component which can remove assigned priorities on software elements and tasks, but does not disclose determining a priority code for tasks, as claimed by the Applicant. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,314,446 B1**

Issued: Nov. 6, 2001

Inventors: Stiles

Detailed Discussion:

This reference discloses a system and method for displaying the status of tasks or processes in a computer system. This patent discloses two classes which display task status information in a list form and tracks threads running in a system. There is no disclosure of a decision engine configured to determine a priority code for each received communication. Thus, this patent is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,360,243 B1**

Issued: Mar. 19, 2002

Inventors: Lindsley et al.

Detailed Discussion:

This patent discloses a task scheduling accelerating method, device, and article of manufacture for determining and controlling multi-tasking. The reference discloses a multi-task execution processor having a preemptive prioritized task scheduling system. Although the reference discloses a method of determining a ready task dependent on the number of priority levels, it does not disclose a decision engine configured to determine a priority code. Thus, this patent is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,408,277 B1**

Issued: June 18, 2002

Inventors: Nelken

Detailed Discussion:

This patent is the parent to the present continuation patent application.

**U.S. Patent No. 6,411,982 B2**

Issued: June 25, 2002

Inventors: Williams

Detailed Discussion:

This patent discloses a scheduling governor that regulates the number of scheduled tasks that are executed concurrently over a network computer system. Task requests are entered into a Priority-Ordered queue based on a specified time interval or sorted time order. The determination of priority is based solely on time and there is no disclosure of a decision engine that is capable of learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected communications. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent No. 6,418,458 B1**

Issued: Jul. 9, 2002

Inventors: Maresco

Detailed Discussion:

This patent discloses a method, apparatus, and article of manufacture for scheduling thread execution in a computer. The reference discloses placing tasks (CWorkCrews) based on three different priorities: master, fast, and slow. However, there is no disclosure of a decision engine capable of learning new criteria based on a relative importance of communications learned from an order in which an agent selected communications. Therefore, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publications**

**U.S. Patent Application Publication No. US 2001/0027463 A1**

Publication Date: Oct. 4, 2001

Inventors: Kobayashi

Detailed Discussion:

This reference discloses a task priority decision apparatus used in a work processing system that performs a work process by sending and receiving task information. Furthermore, the task priority decision apparatus automatically determines process priority of information for a task. The information for a task is stored in a task information storage unit and is later extracted for processing to determine priority. However, this reference does not disclose a parser configured to analyze content of the tasks. The reference also does not disclose a parser configured to parse text, natural language, relationships, concepts, or emotional content. Nor does the reference disclose a decision engine comparing concepts with priority criteria to determine a priority code. Therefore, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2001/0042090 A1**

Publication Date: Nov. 15, 2001

Inventors: Williams

Detailed Discussion:

This reference discloses a scheduling governor that regulates the number of scheduled tasks that are executed concurrently over a network computer system. Priority is time-ordered and tasks are inserted in a Priority-Ordered queue based upon time sorting. However, there is no disclosure of a parser configured to analyze content of a task or communication. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2001/0056456 A1**

Publication Date: Dec. 27, 2001

Inventors: Cota-Robles

Detailed Discussion:

This patent application publication discloses an SMT processor architecture that combines thread execution heuristics with OS priorities to provide a dynamic priority for each thread. The reference discloses adjusting the heuristics or criteria associated with each thread to reflect the thread's priorities. There is no disclosure of a parser configured to analyze content of a received communication or parse natural language, concepts, or relationships. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0032715 A1**

Publication Date: Mar. 14, 2002

Inventors: Utsumi

Detailed Discussion:

This patent application publication discloses a task program control system for switching tasks at a high speed with respect to a task program which is used for reducing the number of cycles of a context switch and controlled in a state fashion. Priority encoding is performed according to a matrix wherein the vertical direction represents the priority and the lateral direction represents the order of the priority. There is no disclosure of a decision engine capable of learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected communications. Instead, the priority is encoded based upon the fix dimension of the matrix, confined to only those criteria specified therein, priority and order of priority. New criteria are not able to be considered as in the Applicant's claimed invention. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0052907 A1**

Publication Date: May 2, 2002

Inventors: Wakai et al.

Detailed Discussion:

This reference discloses an information processing apparatus and method for storing hysteresis data for operations and processing and for performing processing based on the hysteresis data. A planning determination unit which determines the content of a task is disclosed. Also, a task analyzer which analyzes the purpose of a task is also disclosed. However, a decision engine including a parser configured to analyze content of a received communication is not disclosed. A parser that parses natural language and identifies concepts and relationships is not disclosed. Therefore, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0065953 A1**

Publication Date: May 30, 2002

Inventors: Alford et al.

Detailed Discussion:

This reference discloses an application environment for supporting portable, embedded, concurrent, and/or real-time applications. Placement in a priority-ordered FIFO queue is disclosed. However, there is no disclosure of a decision engine configured to determine a priority code for each received communications. As priority is determined by the time when a particular task is placed within a queue, there is no disclosure of the Applicant's claimed invention. Thus, the Applicant's claimed invention is distinguishable from this reference.

**U.S. Patent Application Publication No. US 2002/0073129 A1**

Publication Date: June 13, 2002

Inventors: Wang et al.

Detailed Discussion:

This reference discloses an integrated multi-component scheduling process that may emulate various scheduling methods. A set of scheduler components is disclosed which decides which sub-task should be executed by a processor, by employing a selection function or criterion based on the attributes of parameters for the sub-task. However, neither a decision engine configured to determine a priority code for each received communication nor a parser configured to analyze content of a received communication are disclosed. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0078119 A1**

Publication Date: June 20, 2002

Inventors: Brenner et al.

Detailed Discussion:

This reference discloses a system and method for improving complex storage locks that manage access to a shared resource with multiple readers and writers accessing an area within a computer system. Requests are placed into a FIFO queue and processed based upon their placement. Sleeping processes can gain priority in the queue, but are prioritized based upon whether a storage lock is available and the information within a particular sleeping process. A decision engine configured to determine a priority code for a received communication further capable of learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected a communication is not disclosed. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0078121 A1**

Publication Date: June 20, 2002

Inventors: Ballantyne

Detailed Discussion:

This reference discloses methods and computer-executable components for real-time scheduling of CPU resources. Priority is established based upon time slots which, upon expiration, result in switching from one real-time thread to another, or from one non-real-time thread to another non-real-time thread. There is no disclosure of a decision engine configured to determine a priority code. This reference discloses a real-time scheduler, which is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0078257 A1**

Publication Date: June 20, 2002

Inventors: Nishimura

Detailed Discussion:

This reference discloses a task switching technique involved in a real-time operating system. The reference also discloses processing events based upon assigned priority levels determined based upon the length of time required to process a task. However, there is no disclosure of a decision engine capable of learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected communications. Therefore, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0083251 A1**

Publication Date: June 27, 2002

Inventors: Chauvel et al.

Detailed Discussion:

This reference discloses a digital system and method of operation in which several processors are connected to a shared resource. A software priority state is established during execution of an instruction module on each of several processors, each of which has an access priority value. However, the reference does not disclose a decision engine configured to determine a priority code for non-prioritized communications. Instead, the reference discloses each processor providing an access priority value, which then is used to execute instruction modules for assigned tasks. The reference does not disclose determining a priority code where an event scheduled for execution does not have an already-existing priority code. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0087618 A1**

Publication Date: July 4, 2002

Inventors: Bohm et al.

Detailed Discussion:

This reference discloses a system and method for utilizing dispatch queues operating in a data processing system with multiple processors, an operating system, and an application with multiple threads. However, there is no disclosure of a decision engine configured to determine a priority code for received communications wherein the decision engine includes a parser configured to analyze the content of the received communications. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0087623 A1**

Publication Date: July 4, 2002

Inventors: Eatough

Detailed Discussion:

This reference discloses a method and apparatus for determining network topology and/or managing network-related tasks. Priority values may be based on any number of factors is disclosed. If more than one task exists in a pool, a priority value may be determined for establishing which task is processed first. However, the reference does not disclose a decision engine configured to determine a priority code wherein a parser is included, configured to analyze content of a received communication. Thus, this reference is distinguishable from the Applicant's claimed invention.

**U.S. Patent Application Publication No. US 2002/0091746 A1**

Publication Date: July 11, 2002

Inventors: Umberger et al.

Detailed Discussion:

This reference discloses a system and method for allocating and forecasting computational efforts from a plurality of service components among a plurality or workloads. This reference discloses a priority manager that ranks the relative priority of queued or pending work requests (tasks) in a request queue. However, this reference does not disclose a decision engine configured to determine a priority code for a received communication with a parser configured

to analyze content of a received communication. Nor is a parser configured to identify relationships between concepts of received communications disclosed. Thus, this reference is distinguishable from the Applicant's claimed invention.

Respectfully submitted,

Yoram Nelken

Dated: 8/16/2002 By: Wendi R Schepler

Wendi R. Schepler, Reg. No. 43,091
Carr & Ferrell, LLP
2225 East Bayshore Road, Suite 200
Palo Alto, CA 94303
Tel: (650) 812-3451
Fax: (650) 812-3444